

1.7 Perimeter Tangram Project:

Name _____

Requirements:

1. Complete one of the four puzzle shapes finding perimeter in inches. _10 pts.
2. Complete Tangram Manipulative worksheet (#'s 1 and 2 a-d only) _11pts.
(pictures drawn or copied and pasted for points)
3. Choose one of six tangram shapes from picture and find perimeter in

Simplified radical form (remember you can only add like radicals) _10pts.
4. 1.7 area and perimeter shapes wkst. _4

Total for project _35pts

Late projects will lose an automatic 5 points!

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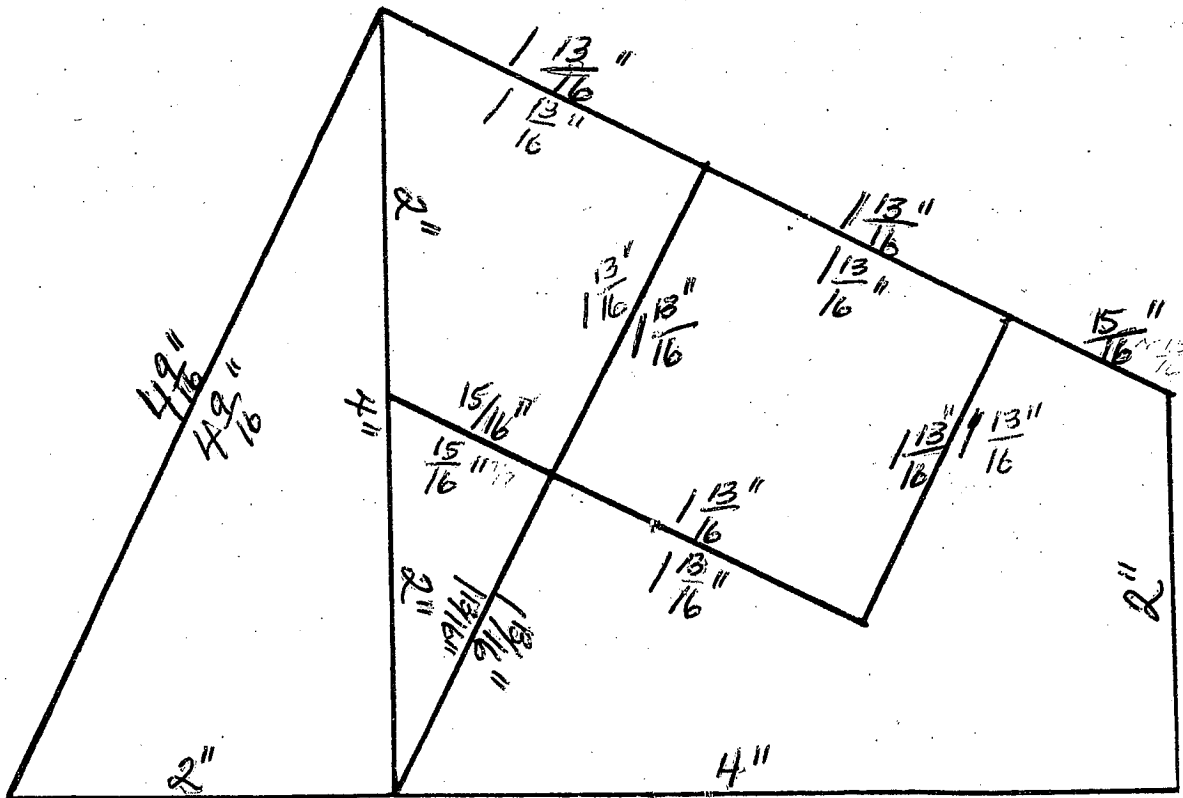
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1.7 PUZZLE

CUT OUT THE FIVE SHAPES BELOW. CAN YOU ARRANGE
THESE FIVE PIECES TO FORM EACH OF THE FOLLOWING:

- 1) A SQUARE
- 2) A CROSS
- 3) A RECTANGLE
- 4) A TRIANGLE

USE ALL 5
PIECES
TO FORM
EACH SHAPE



Manipulative Worksheet

Tangram Fractions

For use with Lesson 6-7.

Name _____

Date _____

Before you begin: you will need scissors and cardboard.

Cut out the tangram puzzle at the bottom of this page and paste it onto a piece of cardboard. Cut on the dotted lines. Use the pieces to answer the questions.

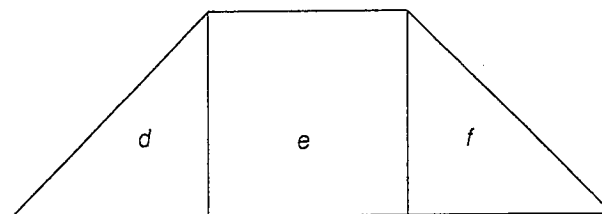
1. Tell what fraction of the whole tangram each piece is. Give the fraction in lowest terms.

a. $a =$ _____ b. $b =$ _____ c. $c =$ _____ d. $d =$ _____
e. $e =$ _____ f. $f =$ _____ g. $g =$ _____

2. Tell which pieces can be used to make each shape. Then using your answers to exercise 1, express the figure asked for as a *sum of fractional parts*. To check your answer, add the fractions and write the answer in lowest terms.

Example:

Use three pieces to make a trapezoid that is $\frac{1}{4}$ of the whole puzzle.



Answer:

d, e, and f.

$$\frac{1}{16} + \frac{1}{8} + \frac{1}{16} = \frac{4}{16} = \frac{1}{4}$$

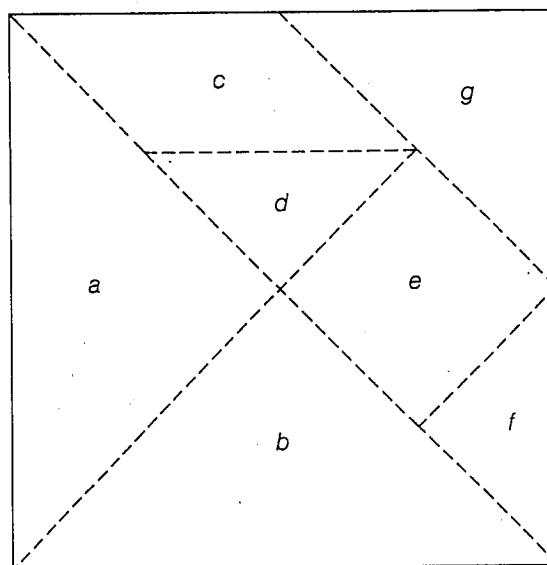
- a. Use five pieces to make a square that is $\frac{1}{2}$ of the whole puzzle.

- b. Use five pieces to make a hexagon that is $\frac{1}{2}$ of the whole puzzle.

- c. Use four pieces to make a triangle that is $\frac{1}{2}$ of the whole puzzle.

- d. Use five pieces to make a rectangle that is $\frac{3}{4}$ of the whole puzzle.

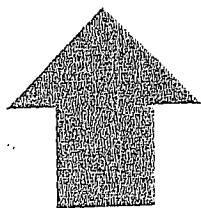
- e. Use four pieces to make a trapezoid that is $\frac{1}{2}$ of the whole puzzle.



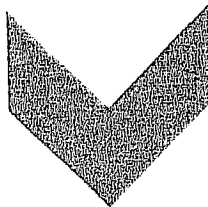
Exploration and Extension

Tangrams In Exercises 33–38, use all seven tangram pieces to create the indicated figure. In each case, find the perimeter of the figure.

33.



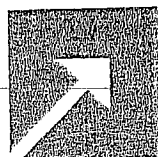
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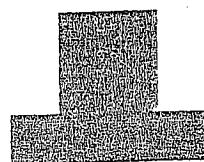
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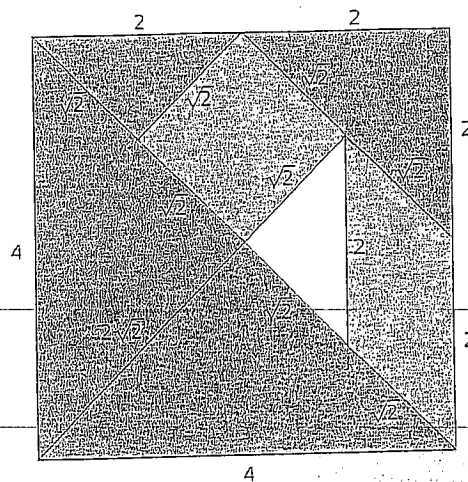
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37.



38.

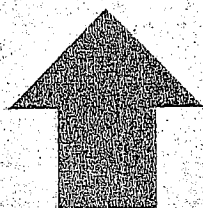


According to Chinese legend, tangrams were created when a man dropped a porcelain tile that broke into seven pieces. When he tried to reassemble the tile, he found that he could create hundreds of different shapes.

Exploration and Extension

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33.



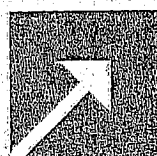
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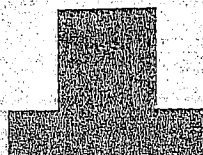
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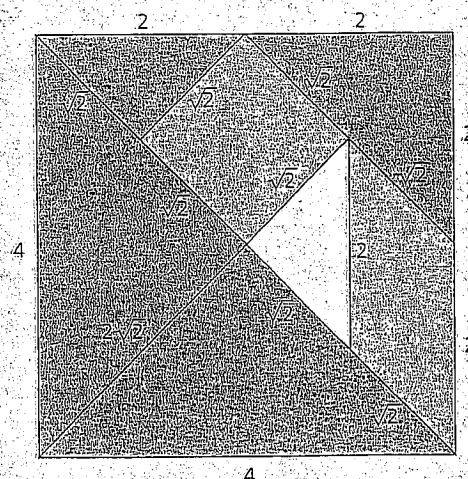
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